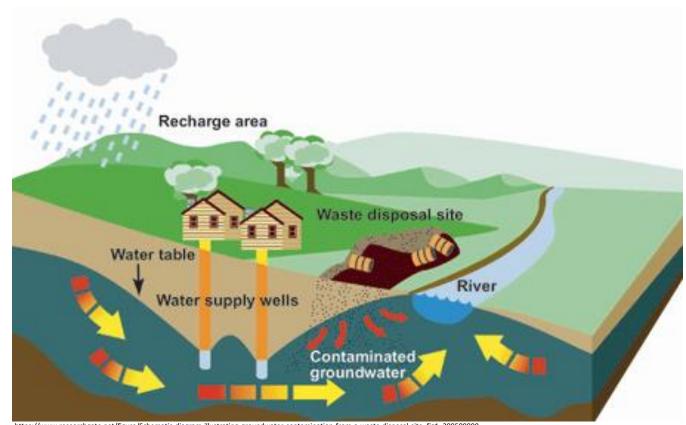


PROPOSED BRUNSWICK COUNTY WELLHEAD PROTECTION OVERLAY ZONING DISTRICT

Background

- Brunswick County Utilities have 14 public community wells in the NC 211 Corridor that get water from the Castle Hayne Aquifer.
- ☐ These wells provide raw water to the NC 211 Water Treatment Plant for public water throughout their service area. There are 12,574 customers that get water from these wells.
- Aquifers and other water sources can be contaminated. The Castle Hayne Aquifer lacks a confining layer of soil making it more suspectable to contamination then other aquifers in the region.
- ☐ Contamination can occur from many sources including wastewater discharges, underground storage tanks, urban storm water runoff, or other types of non-point source contamination such as runoff produced by agricultural activities, junk yards, vehicles, and land clearing for development. Certain practices and businesses are at a bigger risk of contamination.



https://www.researchgate.net/figure/Schematic-diagram-illustrating-groundwater-contamination-from-a-waste-disposal-site_fig1_299509800

"As hundreds of wells often tap into the same aquifer (large underground water supply), it is essential to prevent contamination from reaching these vital underground resources."

University of Georgia

WELLHEAD PROTECTION PLAN

To better protect Brunswick County's vital community water source - the Castle Hayne Aquifer - from contamination the Brunswick County Commissioners adopted the <u>Wellhead Protection Plan</u> on January 28, 2013, with specific policies for the protection the public community well area within the NC 211 Corridor. This policy document guides the protection of the public water groundwater systems by identifying sources of potential contamination, designating the area to be protected, provides short-term & long-term contingency plan, and providing recommendations on specific uses.







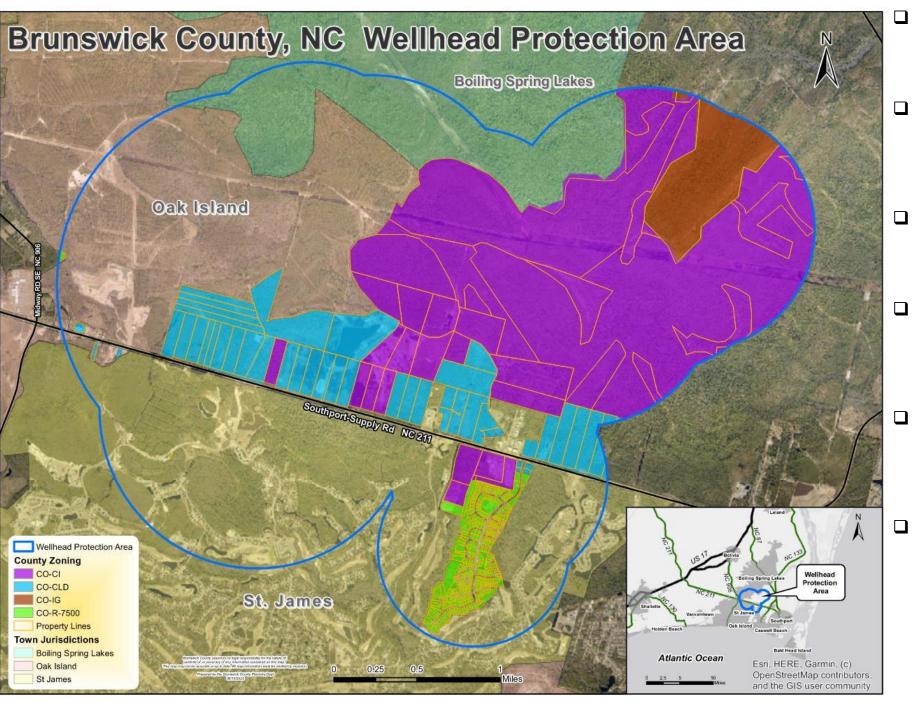
Wellhead Protection Plan Brunswick County, North Carolina



January 28, 2013 PWS ID# 04-10-045

Contact Name: Jeremy Sexton
Position: Water Resources Superintendent
jsexton@brunsco.net
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Bolivia, North Carolina 28422





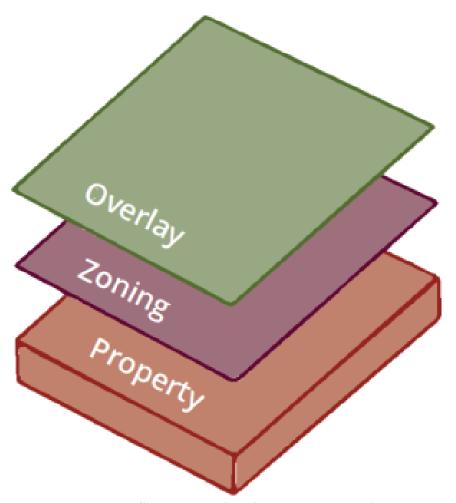
- The Wellhead Protection Area is the area that needs to be protected to impact water quality in the Castle Hayne Aguifer.
- A Wellhead Protection Area was created using a 1,500 ft buffer on the 14 community wells as outlined within the Wellhead Protection Plan.
- Includes portions of Brunswick County, Boiling Springs Lakes, Oak Island, & St. James.
- If Brunswick County adopts a Wellhead Protection Zoning Overlay District it will only apply to areas within unincorporated Brunswick County.
- Other Jurisdictions will be asked to consider adopting regulations like a Wellhead Protection Area Zoning Overlay to help protect water in the Castle Hayne Aquifer.
- Wellhead Protection Area: 6,835.9 acres (14 wells with a 1,500-foot buffer)
 - Includes portions of Brunswick County, Boiling Springs Lakes, Oak Island, and St. James:
 - Brunswick County Jurisdiction: 3,140.8 (45.9%)
 - St. James City Limits : 1,727.8 (25.3%)
 - Oak Island: 1,313.4 (19.2%)
 - Boiling Springs Lakes: 653.9 (9.6%)

Since the Adoption of the Wellhead Protection Plan

- Brunswick County has experienced rapid growth & development.
- Found trace amounts of contamination from water in the NC 211 Corridor public community wells.
- Public Utilities Department approached Planning Department about implementing a zoning regulations to help protect the vital community water source in the NC 211 Corridor.
- Explored ways to protect this vital community water source within the NC 211 Corridor.
- Proposed a zoning overlay district within the NC 211 Corridor.
- Held *Joint Planning & Public Utilities Community Meeting* on September 8, 2022, to present information for discussion & input on wellhead protection.
- Drafted Wellhead Protection Overlay Zoning District.
- Planning Board Public Hearing on Draft Wellhead Protection Overlay Zoning District on October of 2022.
- Updated Wellhead Protection Overlay Zoning District based upon Comments Received

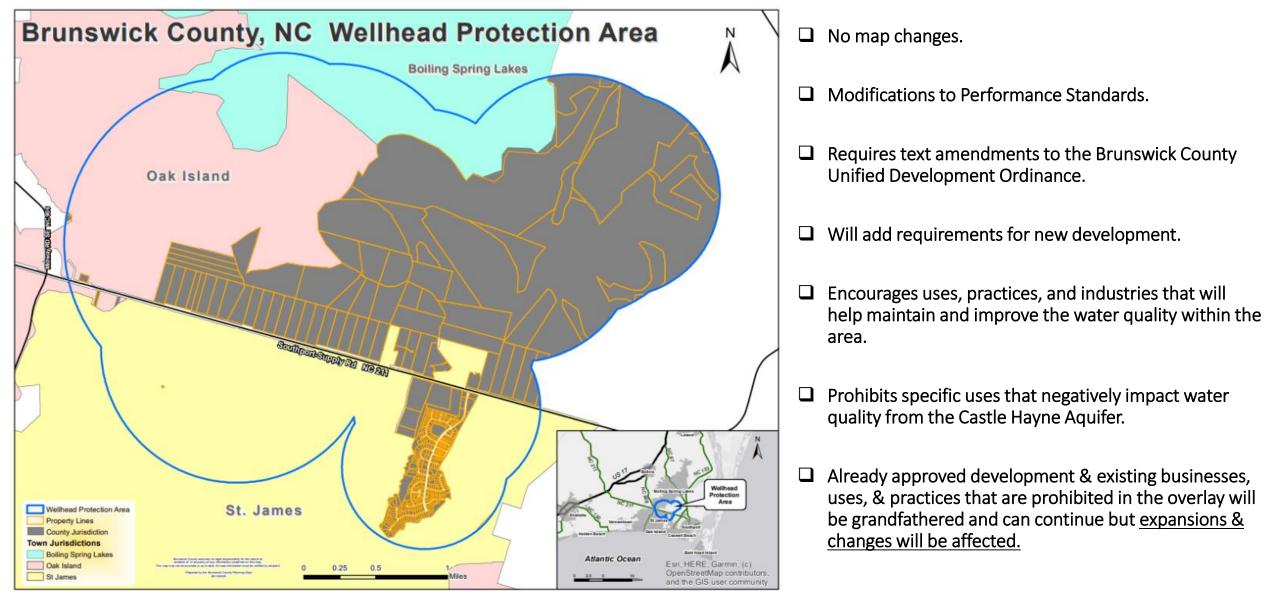
What Is A Zoning Overlay District?

- Zoning exists to protect the health, safety, and general welfare of county residents through the Brunswick County Unified Development Ordinance.
- ☐ Zoning Districts outline uses allowed, standards, and development requirements. Brunswick County has a variety of residential, commercial, & industrial Zoning Districts.
- A zoning overlay zoning district is applied over one or more previously established zoning districts. It establishes additional or stricter standards and criteria for covered properties in addition to those of the underlying zoning district.
- Brunswick County currently has five overlay districts:
 - ☐ Airport Height Control Overlay
 - ☐ Economic Development Overlay
 - ☐ Transitional Office Overlay
 - ☐ Viewshed Protection Overlay
 - ☐ Water Quality Protection Overlay



https://www.countyplanning.us/projects/maple-heights-zoning-code-update/

UPDATED BRUNSWICK COUNTY WELLHEAD PROTECTION OVERLAY ZONING DISTRICT



Implementing A Wellhead Protection Overlay Zoning District Requires the Following Amendments To the Brunswick County UDO

Add Section 4.8.8. to outline the new zoning overlay district and provide standards

4.8.8 WPA: Wellhead Protection Area Overlay

A. Purpose and Intent

- 1. The Brunswick County Board of Commissioners recognizes: (a) that residents of Brunswick County rely on groundwater for a safe drinking water supply, and (b) that certain land uses in Brunswick County can contaminate groundwater particularly in shallow/surficial aquifers.
- 2. The purpose of the Wellhead Protection Area Overlay District (WPA) is to protect public health and safety by minimizing contamination of the shallow/surficial aquifers, Castle Hayne aquifer, and the Pee Dee aquifer in Brunswick County. It is the intent to accomplish this, as much as possible, by public education and securing public cooperation.
- 3. Appropriate land use regulations may be imposed, however, which are in addition to these imposed in the underlying zoning districts or in other county regulations.

B. Definitions Specific to the WPA Overlay

 AQUIFER. A geological for yielding groundwater to wel



n capable of storing and

Update Section 5.2.3., to clarify what uses are permitted with in the Wellhead Protection Overlay Zoning District

													5.2 Use 1	able
	5.2.3. Use Table													
	The following principal uses are See Section 4.8.2 for Condition													
Jse Grouping	Use	RR	R-7500	R.8000	SBR-6000	MR-3200	C-LD	N-C	C-I	RU-I	L-G	CP	WPA Overlay District	Standards
	KEY: Blank Cell = Not Allowed; "P" = Permitted			andards (S						110-1		01		Cibilosio
Agricultural														
Agricultural (5.1.1. A)	All Agricultural uses, except as listed below	/ P					Р		Р		P	P	SUP	4.8.8. D
	Agricultural Industry	L	\wedge				L		L	L	Р		OUD.	5.3.2.A
	Agricultural Tourism	1	L				L	L	L	L	L	L	SUP	5.3.2.B 4.8.8. D
	Bona Fide Farms	L	1	L)	1	L	L	L	L	L	L	L	L	5.3.2.C
	Farmers Market	P/	P				P	P	Р	P			P	
	Farm Stands	P	L		/		Р	Р		Р		Р	P	
	Private Stables	P	L	-	L		P	Р					SUP	5.3.2.D 4.8.8. D
	Malting house	L							\vdash					5.3.9
	Landscaping and Horticultural Services	P					1 P			Р			SUP	4.8.8. D
	Nurseries	P					P	Р						
Residential	See 5.5.6 for prohibited temporary uses													
Household Living (5.1.2. A)	Single Family Detached	P/PD	P/PD	P/PD	P/PD	P/PD	У	L	1			Р	L	4.15 4.8.8. D
	Zero Lot Line	L/PD	L/PD	L/PD	LIPD	L/PD	L/PD	L/PD/	L	\wedge			L/PD	5.3.3.L 4.8.8. D
	Traditional	P/PD	PD	PD	PD	P/PD	L/PD	L/PD	1			>	L/PD	5.3.3.J 4.8.8. D
	Semi-Attached	P/PD	PD	P/PD	PD	P/PD	P/PD	P/PD				//	P/PD	5.3.3.H 4.8.8. D
	Duplex	P/PD	PD	P/PD	PD	P/PD	P/PD/	P/PD/					P(PD	4.8.8. D
	Townhouse	PD	PD	PD	PD	L/PD	1	1		7			1	5.3.3.I 4.8.8. D
	Multifamily		PD	PD	PD	L/PD	1	/ [L			/	L/PD	5.3.3.E 4.8.8. D
	Family Care Home	L	L	L	L	L	L	L	L			1	L	5.3.3.A
	Mobile Home, Class A	1	L	L			L	L	L			/_	/ L	4.8.8. D 5.3.3.C.3
	Mobile Home, Class B	L	_	L			L	L	L		-/	-/	L	5.3.3.C.4
											/			
	Unified Development Ordinance				REVISED - 9						1	/		

WHAT COULD BE DEVELOPED WITHIN THE OVERLAY??

Planned Developments

Residential Including Single-family Detached, Mobile Homes, Townhomes, Upper Story Residential, & Multifamily

Buildings & Structures That Do Not Have Deep Foundations/Footers (less than 23 ft)

Clean Industries

Businesses & Retail Establishments That Do Not Impact Water Quality

WHAT RESTRICTIONS COULD BE IMPOSED IN THE OVERLAY??

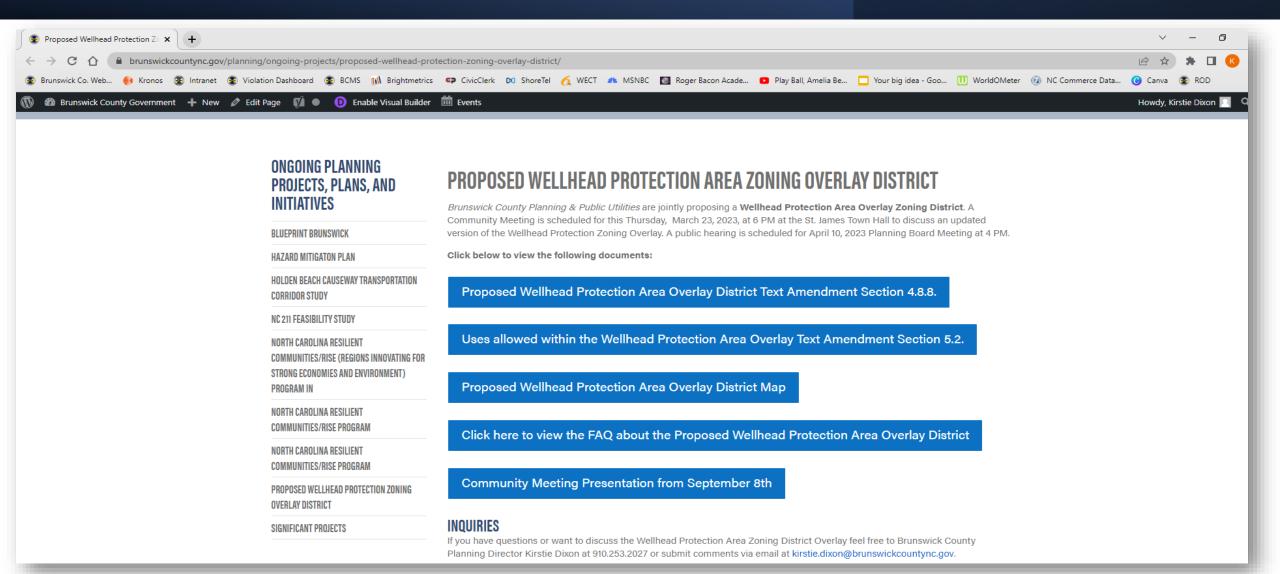
23 ft Limitations On The Depths Of Digging,
Disturbance, And The Removal of Dirt

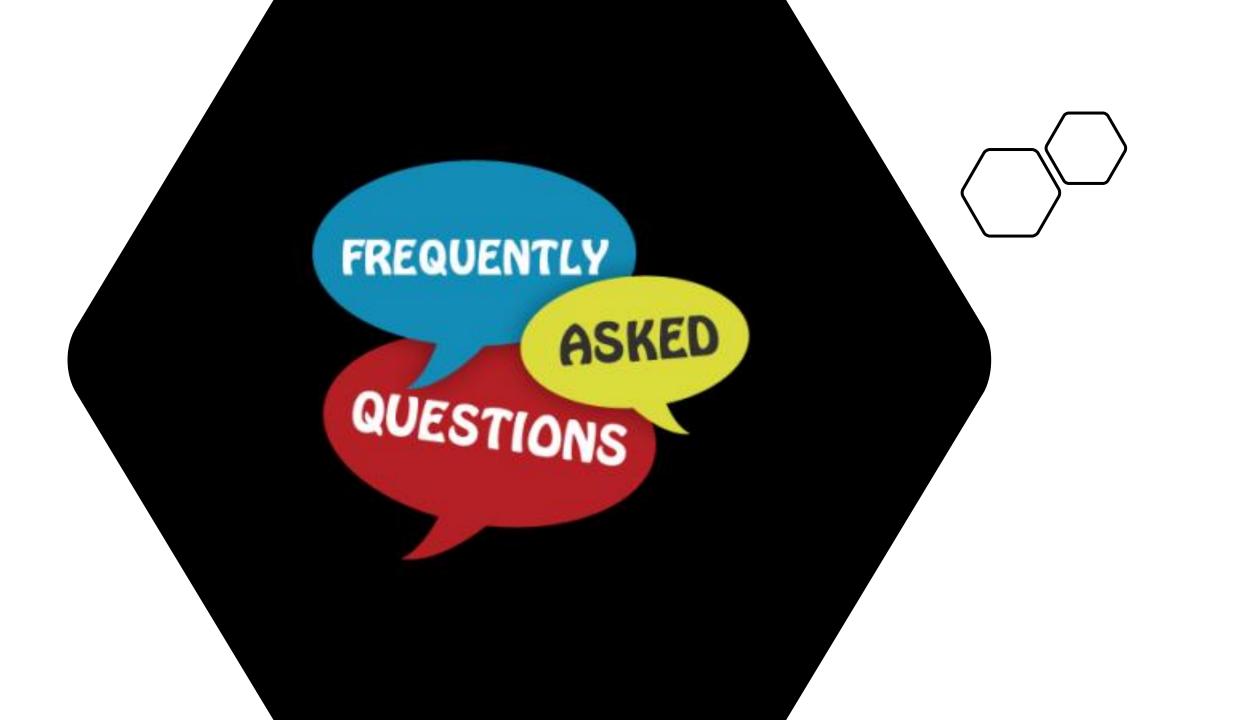
Limit Uses that Use/Store
Chemicals & Known
Hazardous Materials

Prohibition On Mining Activity, Fuel Stations, Junkyards, Automobile Repair, & Septic Tanks

Prohibits Underground Storage Facilities

Information Available Online on Planning Dept. Website (Under Ongoing Planning Projects, Plans, and Initiatives Tab)





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